Peer Review of:

Socioeconomic Impact of Gambling on Iowans

Final Draft Report

Prepared for
Iowa Legislative Council
State Capitol
Des Moines, IA 50319

Prepared by
SCHOOL OF HEALTH, PHYSICAL EDUCATION, AND

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The Iowa Legislature contracted with the University of Northern Iowa to produce a study of the social and economic impact of gambling on the residents of the state of Iowa. The Request for Proposal (RFP) stated that the study should focus on four areas that included the "economic impact of gambling on communities and other business" and an assessment of the impact of "pathological or problem gambling on individuals, families, social institutions, criminal activity, and the economy." The Study Specifics section of the Request included 4½ pages of detailed questions of interest such as:

- "How does the introduction of a casino into a community affect retail sales in that community, including tax revenues generated by retail sales, compared to retail sales in a similar community in which a casino is not located? (p. 2)
- "Is the overall crime rate in a community in which a casino is located higher, lower, or the same as a similar community in which a casino is not located?" (p. 2)
- "Is the percentage of commercial bankruptcies and business-related crimes, including insurance fraud, in a community in which a casino is located higher, lower, or the same as in a similar community in which a casino is not located?" (p. 3)
- "How does a casino affect the local job market?" (p. 3)
- "Is the percentage of problem or pathological gamblers in a community in which a casino is located higher, lower, or the same as in a similar community in which a casino is not located?" (p. 4)
- Other questions that address possible harmful consequences such as public assistance, domestic abuse, suicide.

No study of the type and size funded here could adequately address so many in-depth questions. The RFP, however, makes it clear that the evident intent and underlying motivation for the study is to provide the legislature with direction on understanding the main impacts of gambling in the state for use in evaluating its benefits and possible harm to residents, individuals, and families. Implicit in the request to include "issues to fully examine the socioeconomic impact of gambling" (RFP, p. 1, item 5), therefore, is an invitation to the Consultant to provide expert guidance about the main pros and cons, their

relative sizes and importance. It is in this context that I provide comments on the study produced by the University of Northern Iowa.

There are many industries in the private sector for which studies have not been requested. The state generally does not commission a study unless there is need for assessing an avoidable harm or an achievable benefit that requires legislative action to attain. A study of gambling divides into four types of information:

1. **Descriptive and impact data:** Descriptive and impact data refer to variables such as profiles of gamblers versus non-gamblers, employment, unemployment, taxes paid, diversion of demand monies from other sectors, determining and reporting the share of net new revenues from out-of-state gamblers, comparing casino host counties' statistics to others to ascertain relevant patterns of difference.
2. **Benefit data:** The benefits of gambling are much misunderstood. Benefits are therefore often mis-reported. For example, jobs and taxes paid do not measure benefits. The failure to account for *lost* taxes on diverted spending, *lost* jobs in other sectors and similar cancellations leads to erroneous representations of counterfactual comparisons. Net new revenues collected by the industry do not measure benefits. My book (Grinols, *Gambling in America: Costs and Benefits*, 2004) provides detail on the theoretically correct way to measure benefits. By tracking *net* change in all business profits, *net* change in all taxes paid, plus the other price changes that influence the well being of residents in areas with casinos, approximate benefits can be determined. To do a complete assessment of benefits, the state would have to compile data from American Indian casinos in addition to other gambling outlets to determine the size and use of funds for all gambling of interest in the state.

3. **Social Cost data:** Social costs of casinos are easier to determine than benefits, but also imply the need for valid counterfactual comparisons. That is, what costs are imposed on residents as a group that would not be present if gambling were absent?
4. **A summary assessment** of properly calculated social benefits relative to social costs: Every study produced for the state should be tasked to provide an overall conclusion about who gains and who loses due to gambling in the state as well as the size of the benefits and costs.

The *Socioeconomic Impact of Gambling on Iowans* does a commendable job providing a great deal of the descriptive and impact data asked for about individuals that gamble and counties that host casinos. It uses appropriate methodology for the wealth of information that it provides. Its survey instrument is inadequate to answering questions 2 and 3 above, however, and so the study does not provide guidance regarding question 4. In future studies, the survey instrument can be improved using existing methodology to provide more information for legislative evaluation and review of the harmful consequences invited by the RFP. Future studies also are capable of providing an overall assessment of the size of the net benefit/cost of gambling in Iowa. I elaborate on the last point in the remainder of my review, followed by selected specific comments.

Survey Instrument and Social Costs of Gambling

In evaluating the survey instrument and data collected I reference three state-of-the-art studies that indicate the type of information that is obtainable and what can be done with it:

- Ryan, Timothy P., Janet F. Speyrer, et al. (1999) "Chapter 5: Gambling Costs" in *Gambling in Louisiana: A Benefit/Cost Analysis*, Prepared for The Louisiana Gaming Control Board, April 1999. http://www.uno.edu/~coba/dber/gambling1998/index.html, accessed 19 May 2005.

- National Opinion Research Center (NORC) (1999) "Chapter 3. Economic Analysis of the Consequences of Gambling Problems among Adults" and "Chapter 5. Impacts of Casino Proximity on Social and Economic Outcomes, 1980–1997: A Multilevel Time-Series Analysis" in *Gambling Impact and Behavior Study: Report to the National Gambling Impact Study Commission*, National Gambling Impact Study Commission, June. http://govinfo.library.unt.edu/ngisc/20reports/res-rpts.html, accessed 19 May 2005 (Study referenced in *Socioeconomic Impact of Gambling on Iowans*).
- Gazel, R. C., W. N. Thompson, and D. S. Rickman (2001) "Casino Gambling and Crime: A Panel Study of Wisconsin Counties," *Managerial and Decision Economics*, 22, 1-3, 65-76.

The last paper is included because it is an example of how regression methodology can be used to directly assess the impact of casinos on crime, one of the social costs asked about in the state RFP.

Ryan, et al. and other researchers have identified a list of gambling social consequences that are exhaustive, or nearly so, and mutually exclusive to prevent double counting. They are:

- **Crime:** Apprehension and increased police costs; adjudication costs, incarceration costs.
- **Business and Employment Costs**: Lost productivity on the job, lost work time, unemployment-related employer costs.
- **Bankruptcy**
- **Suicide**
- **Illness**
- **Social Service Costs**: Therapy/treatment costs, unemployment & other social services including welfare and food stamps.
- **Government Direct Regulatory Costs**
- **Family Costs**: E.g. Divorce, separation, child abuse, child neglect, and domestic violence.

- **Abused dollars:** Money obtained for gambling under false pretenses. Such taking might not be reported as a crime, for example, because the victims are friends or relatives.

To put numbers to social costs, Ryan and NORC construct survey instruments that identify demographic and economic characteristics of the respondents, their behavior as it relates to social cost items of interest, their gambling behavior, and their status and behavior toward related issues such as drug and alcohol use. This data is processed to determine what the social costs to society are of one additional pathological gambler and one additional problem gambler according to the degree of gambling pathology. They deal with two important methodological issues. The first is representativeness of the sample they examine to the population at large of problem and pathological gamblers (sample selection bias). The second is the impact of multi-causality. Some of the social costs created by an alcoholic pathological gambler, for example, may be caused by alcoholism. Only social costs caused by the gambling should be attributed to gambling. In the medical world, multi-causality would be termed co-morbidity: a patient may have several diseases that contribute to his lack of health. In addition, NORC methodology was able to determine the increase in gambling problems as a function of proximity to the casino. This was another question of interest to the legislature and referenced in the RFP.

Methodology

As indicated, currently available studies contain apposite methodology that can be used to complete the following steps:

1) Working from the list above, develop taxonomy of social costs of interest.
2) Working from the survey instruments of Ryan et al., and NORC, develop a survey instrument or instruments that—in addition to collecting demographic and other standard data—
    a. identifies the degree of gambling pathology (Ryan et al. incorporate the South Oaks Gambling Screen, for example. NORC develops its own screen. If a screen other than

South Oaks is used, it should be normed against the South Oaks and both numbers provided for comparison purposes.)

b. identifies the degree of other causal factors present. (NORC methodology can be consulted. See also the items included in the discussion of multi-causality in Bridwell and Quinn (2002).)

c. identifies social costs (Ryan et al. is more complete in the list of costs estimated. NORC provide data on a smaller partial list.)

3) Process the survey instrument using statistical methods. (Both the logistical regressions of NORC and the alternate methodology of Ryan et al. can be applied.)

4) Determine the social cost to Iowa of a gambler of each level of pathology.

5) Apply the social cost numbers to estimates of the number of each type of gambler present in the state due to gambling to develop a total social cost number.

6) Working from the methodology of Gazel et al. (2001), a parallel study can determine the additional crime attributed to gambling. Apply available cost figures from the criminology literature to the additional numbers of each crime considered to produce an independent estimate of the crime costs in Iowa. See also Grinols and Mustard (2005). This study finds that approximately 8 percent of crime observed in casino counties in the sample studied would not be present if casinos were absent.

The list of identifiable social costs of gambling, Ryan et al., NORC and the other studies cited provide a great deal of information about how the information requested by the state of Iowa can be obtained. A precaution for objectivity and accuracy is to commission parallel teams, instructing them to work from the methodology above to obtain the same costs. The numbers desired can be specified quite precisely based on easy refinements of the outline above. Teams should work in isolation from one another and

report their work at the same deadline. Their reports can then be compared and contrasted. Follow-up is determined by what is found.

Synopsis

A complete study of gambling in Iowa should provide an overall assessment of the balance of costs and benefits. According to Ryan et al. the social costs in Louisiana were $531,470,000 or approximately $167.63 per adult over the age of 18. Adjusting to April 2005 dollars, this would be $200.13 per adult. Applying the adjusted figure to 2,186,153 Iowans over the age of 18 (Census Bureau estimate for 1 July 2004) implies costs to Iowa of $437,514,800. It is not known whether this figure is accurate for Iowa or how it might compare to total benefits received by the state from its gambling operations. It is also not known the extent to which those who lose from gambling are distinct from those who win. These data are obtainable, however, from existing methodology that has been applied elsewhere and could be adapted to Iowa. When accurate benefit numbers are obtained for Iowa, the social cost total can be compared to the social benefit number.

Specific Comments (Page references precede)

1) **P. 15:** The authors of the report should be commended for using figures to convey information graphically, displaying trends and relative orders of magnitude. Statistical information would be helpful in addition. Unemployment is caused by many factors which may differ by county, only one of which factors is the presence of a casino. Econometric and regression evidence about the effect of casinos on unemployment rates is needed to sort out potential causal connections. Comparisons between a selection of control and casino counties invite sample selection bias. Regression methodology is designed to deal with multiple factors and can be applied to *all* counties in Iowa. Many papers in the labor economics literature provide methodology for determining the employment effects. Grinols and Mustard (2005) methodology could even be adapted to unemployment, with various adjustments such as lagged dependent variables used to provide appropriate

dynamics, casino revenues used to replace casino dummy variables, and other changes.

2) **P. 16.** The same comment applies to crime, which is caused by many factors other than casinos. Use all data from all counties with evidence on casino revenues, date of opening, with leads and lags, to separate the effect of casinos on crime from other variables. See Gazel et al. (2001) and Grinols and Mustard (2005), already cited.
3) **P. 17.** Bankruptcy can be treated econometrically (see comment 1).
4) **P. 19.** Jobs, taxes, charitable contribution figures of casinos are provided, but no cost figures. As noted above, taxes paid, profits of casinos, jobs created, and so on are not measures of social benefit. See, for example, Rappaport and Wilkerson (2001) for a discussion of the pitfalls to avoid in measuring social benefits.
5) **P. 19.** No net cost-benefit ratios are given.
6) **P. 24.** Data limitations are a concern, as the authors note. Regarding the percentage of gambling revenues from out-of-area visitors, many studies have had to rely on license plate counts in repeated parking lot surveys. The report states without elaboration: "It was not possible to include the tribal casino data in the economic impact analysis." If tribal casinos failed to provide data that is available from other casinos in the state, it is a matter that should be looked into, as this is a serious shortcoming.
7) **P. 25.** Economic impact should be extended to include the value to the community of an additional job. Estimates in the literature, for example, find that additional jobs could have value to existing residents, but also might provide zero net value.
8) **P. 28.** When demographic data on visitors from Iowa counties is provided, side-by-sides of the same type of data for the state as a whole, and for the rest of the county as a whole (i.e. minus the county casino visitors) should be displayed.
9) **P. 31.** Casinos declined a request to allow onsite survey of residents. Why?

10) **P. 33-36.** It might be very helpful to the reader to provide time series of employment impact (other impacts can be treated similarly) based on the assumption that 100% of casino revenues in a county are net new expenditures from the outside, applying the relevant impact multipliers, and producing an implied employment total. This trend line can then be compared to the actually observed employment to provide an assessment of impact relative to the largest possible impact.

11) **P. 44.** Data on gambling by residents is very helpful. To determine the share of casino revenues from problem and pathological gamblers, the methodology of Williams and Woods (2004) that uses gambler diaries, not just recollection, could be used.

12) **P. 47.** In retrieving perceptions data, questions of the type, "Someone in my family has a gambling problem" or "has a gambling problem but has sought treatment" are a check on the reliability of the perceptions provided. "I have personally benefited from/been harmed by gambling" is another example of a question that invites reporting first-hand experience.

13) **P. 48-60.** Perceptions about the impact of casinos are useful. Factor analysis is also useful, and I like the sampling of casino employees as a separate group. However, before I would place much weight on the perceptions of the public or casino employees on the impact of casinos on "more investment has come to my community" (p. 57), or "local crime has increased" (p. 58), for example, I would like to have greater assurance about the knowledge of the people being sampled.

14) **P. 65.** When profiling pathological gamblers it would be helpful to have side-by-side data for the rest of the state as a whole and some statistical guidance about whether the differences are statistically significant.

15) **P. 79.** See the discussion above for a better methodology to determine the connection between gambling and crime. Using control counties invites sample selection bias. Another methodology that can connect gambling to crime is demonstrated in Smith, Garry, Harold Wynne, and Tim Hartnagel,

(2003) which, using police blotters, found that about 5 percent of crime was due to gambling for the six months studied.

16) **P. 85.** The report summary should provide an overall number for the value of benefits provided Iowa from casino gambling and an overall number for the value of social costs imposed on the state. If employment figures are reported, then the report should provide a number for the value to existing Iowa residents of another job. See Rappaport and Wilkerson (2001), already referenced, for discussion of the value of a job to existing residents.

17) **Pp. 94-140.** Guidance should be given about whether the differences reported are statistically significant and are socially significant in any sense. Is casino gambling the cause of the differences noted, or can the casino connection not be separated from the host of other variables that also could cause the differences presented?

References

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